

Unit
8

Written Practice Assessment



Part A

Use the advertisement at the right to solve Problems 1-5.

1. Complete the rate table below.

inches	6	24	72	18	1
people	1	4	12	3	$\frac{1}{6}$



**Feed 12 people
for \$24!**

You can, when you buy a 6-foot cold-cut party submarine sandwich.

2. Eighteen inches of sandwich feed 3 people. At this rate, how many feet of sandwich are needed to feed 26 people? 13 ft
3. If 12 people share a sandwich equally, how many inches will each person get? 6 in.
4. What is the cost per person? \$2
5. Explain how you found the cost per person.

Find the missing value in each proportion.

6. $\frac{3}{8} = \frac{15}{s}$ $s =$ 40

7. $\frac{4}{6} = \frac{t}{21}$ $t =$ 14

8. $\frac{z}{16} = \frac{9}{36}$ $z =$ 4

9. $\frac{2}{m} = \frac{4}{18}$ $m =$ 9

For Problem 10, complete the rate table. Use the table to write an open proportion. Then, solve the proportion.

10. A species of bamboo grows at a rate of 6 inches every 9 hours. About how many hours does this species take to grow 30 inches?

45 hours

inches	12	6	24	30	$\frac{6}{9}$
hours	18	9	36	45	1

inches	6	=	30
hours	9	=	x

Name _____

Date _____

Time _____

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For Problem 11, complete the rate table. Use the table to write an open proportion. Then, solve the proportion.

11. Mr. Joseph rode his motorcycle 112 miles on 4 gallons of gasoline. How far can he ride on 12 gallons?

miles	1	112	28	336
gallons	$\frac{1}{28}$	4	1	12

$$\frac{\text{miles}}{\text{gallons}} = \frac{112}{4} = \frac{x}{12}$$

336 miles

Write proportions to solve each problem below.

12. Stephen bought 3 boxes of pencils for \$4. How many boxes of pencils can he buy for \$12?

$$\frac{\text{boxes}}{\text{dollars}} = \frac{3}{\$4} = \frac{x}{\$12}$$

9 boxes of pencils

13. Melinda was reading a detective story. She read 75 pages in 2 hours. At this rate, how many pages can she read in 40 minutes?

$$\frac{\text{pages}}{\text{minutes}} = \frac{75}{120} = \frac{x}{40}$$

25 pages

14. Peter missed 60 % of the questions on the last science test. How many questions did he miss if there were 30 questions on the test?

$$\frac{\text{part}}{\text{whole}} = \frac{60}{100} = \frac{x}{30}$$

18 questions

15. 25% of what number is 7?

$$\frac{\text{part}}{\text{whole}} = \frac{25}{100} = \frac{7}{x}$$

25% of 28 is 7.

Name _____

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16. The table below shows the calorie and fat content in 1 cup of two kinds of yogurt. Complete the table. Round the calculated fat percent to the nearest whole percent.

Food Label	Food	$\frac{\text{Calories from Fat}}{\text{Total Calories}}$	Calculated Fat Percent
Nutrition Facts Serving Size 1 cup (225 g) Servings Per Container 1 <hr/> Amount Per Serving <hr/> Calories 190 Calories from Fat 42	Mango yogurt	$\frac{42}{190}$	22%
Nutrition Facts Serving Size 1 cup (225 g) Servings Per Container 1 <hr/> Amount Per Serving <hr/> Calories 220 Calories from Fat 57	Vanilla yogurt	$\frac{57}{220}$	26%

Solve each problem.

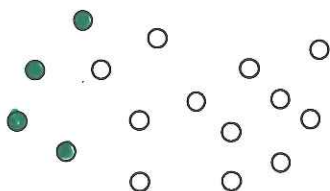
17. Six out of every 8 cards are facedown. If 16 cards are faceup, how many cards are there in all?

There are 64 cards in all.

18. The ratio of faceup to facedown cards is 4 to 7. If there are 176 cards altogether, how many cards are faceup?

64 cards are faceup.

19. Shade $\frac{1}{4}$ of the circles below.



20. What percent of the circles in Problem 19 are shaded?

25 % of the circles are shaded.

21. What is the ratio of shaded circle to unshaded circles in Problem 19?

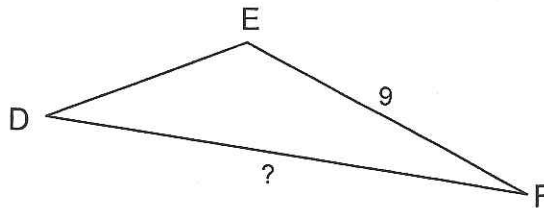
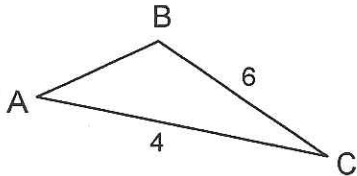
Ratio 1:3

22. How many more unshaded circles would you have to draw in Problem 19 to make the ratio of shaded circles to unshaded circles 1 to 5?

8 unshaded circles



23. Triangles ABC and DEF are similar.



- a. The length of side DF = 6 units.

- b. The size-change factor is: $\frac{\text{large triangle}}{\text{small triangle}} = \frac{3}{2} \times$

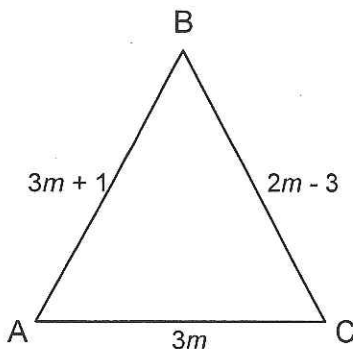
Part B

24. Use the order of operations to evaluate each expression.

a. $[6(22 - 18)] \div \frac{8 + (-11)}{3} = \underline{-24}$

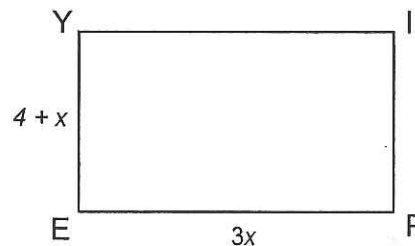
b. $\left[\frac{4 \cdot 2(-5 + 6)}{1 - (-3)} \right] \cdot -7 = \underline{-14}$

25. Find the perimeter of triangle ABC when $m = 4$ units.



Perimeter = 30 units

26. Find the area of rectangle $YIPE$ when $x = 8$ units.



Area = 288 units²

Divide. If necessary, show your work on another sheet of paper.

27. $289.1 \div 14 = \underline{20.65}$

28. $43.056 \div 4.8 = \underline{8.97}$